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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,304	08/06/2001	Yutaka Yamagata	107734	5220

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EXAMINER

GORDON, BRIAN R

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	09/674,304		YAMAGATA ET AL.	
	Examiner		Art Unit	
	Brian R. Gordon		1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8-30-04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 7 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 8-30-04.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Section Headings are missing.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the liquid treating equipment with a flow path with a depth greater than a desired liquid level, does not reasonably provide enablement for any other configuration other than the relationship of the flow path with the desired liquid level. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The claimed invention would not work if the flow path is at a lesser or same depth as a desired liquid level since no liquid would ever spill into the flow path, such that there would be no liquid in the discharging vessel for the discharge tube to discharge.

Claim 1 broadly states "at the almost same level". That could be at almost the same level but slightly below the desired level. As such the liquid would never reach the desired level.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The term "almost the same level" in claim 1 is a relative term which renders the claim indefinite. The term "almost" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term almost does not portray any specific distance. What one person considers as almost may not be considered almost by another.
5. Claim 1 recites the limitation "the discharging inlet" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Interpretation

1. Applicant amended claim 10 recite a center axis. Claim 10 does not limit the shape of the discharge vessel. The discharge vessel can be any shape (square, rectangular, etc.) and meet the limitation of claim 10. An axis of any shape is considered to be a central balance point of rotation.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,085,717 to Anscherlik.

Anscherlik discloses a liquid treating equipment (see figure). A storage vessel (3) stores a liquid supplied by a liquid supplying means (P) through an injection tube (91), which extends above the storage vessel (see figure). A discharging vessel (8) is joined with the storage vessel (3) by a flow path (7) (see figure). At least the bottom surface of the flow path is situated at a lower level position than the desired level of liquid (L) to be stored in the storage vessel (see figure). A discharge tube (2) has a discharging inlet positioned on the discharging vessel to allow liquid to be discharged from the discharging vessel (see figure). The discharging inlet is positioned at the almost same level position as a desired liquid level (L) of the liquid to be injected into the storage vessel as shown by the inlet on the discharging vessel near the line representing the desired liquid level (see figure). The discharging inlet appears to be positioned at the center of the exterior surface of the discharging vessel, which has a rounded surface (see figure). A liquid discharging means (4) discharges the liquid from the discharging vessel (8) through the discharge tube (see figure; col. 2, lines 44-54). The limitation of the liquid discharging means with a sufficient flow rate larger than that

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of the liquid supply means is considered a recitation of intended use that does not structurally further define the equipment. Therefore, as long as the liquid discharging means is capable of a flow rate larger than that of the liquid supply means the limitation is met. The method of forming the device is not germane to the issue of patentability of the device itself. Therefore, the limitation of the storage vessel, flow path, and discharging vessel formed at a single base material has not been given patentable weight, especially since the ultimate structure of the apparatus is not affected.

3. Claims 1-3, 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,140,527 to Jones et al.

Jones et al. disclose a liquid treating equipment (fig. 1). A storage vessel (42) stores a liquid supplied by a liquid supplying means (36,40) through an injection tube (44), which extends into the storage vessel (fig.1). A discharging vessel (12) is joined with the storage vessel by a flow path (46) (fig. 1). A discharge tube (16) has a discharging inlet positioned on the discharging vessel to allow liquid to be discharged from the discharging vessel by a liquid discharging means (14) (fig. 1). It appears the discharging inlet is positioned at the almost same level position as a desired liquid level of the liquid to be injected into the storage vessel (fig. 1). The discharging inlet appears to be positioned at the center of the exterior surface of the discharging vessel, which has a rounded surface (fig. 1). The discharging vessel appears to have a surface area twice or over as large as that of the storage vessel (fig. 1). The limitation of the liquid discharging means with a sufficient flow rate larger than that of the liquid supply means is considered a recitation of intended use that does not structurally further define the

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equipment. Therefore, as long as the liquid discharging means is capable of a flow rate larger than that of the liquid supply means the limitation is met. The method of forming the device is not germane to the issue of patentability of the device itself. Therefore, the limitation of the storage vessel, flow path, and discharging vessel formed at a single base material has not been given patentable weight, especially since the ultimate structure of the apparatus is not affected.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,085,717 to Anscherlik.

Anscherlik fails to disclose a liquid discharging means facilitating discharge through the discharge tube. Rotary displacement pumps and positive displacement pumps with plungers moving back and forth in their cylinders by a pulse motor are very well known and often used to supply and discharge liquids. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a rotary air pump or positive displacement pump with plungers moving back and forth in their cylinders by a pulse motor to facilitate quick and precise supplying of liquid to the storage tank and discharging of the liquid to prevent accumulation of liquid in the discharging vessel and backflow of liquid into the storage vessel with the use of suction to more quickly discharge fluid and unclog the discharge tube.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,085,717 to Anscherlik in view of U.S. Patent No. 3,909,205 to Jones.

Anscherlik fails to disclose the injecting inlet of the injection tube is positioned at a lower level position than the desired liquid level of the liquid to be stored in the storage vessel. Placing the injecting inlet below liquid levels is very well known. See for example, Jones who teaches placing the injection tube (18) downward into the storage vessel, such that the lower ends of the injection tube is below the liquid level in the

storage vessel (col. 2, lines 16-20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the injecting inlet below the desired liquid level to prevent splashing as taught by Jones (col. 2, lines 16-20).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,140,527 to Jones et al.

It is unclear whether the discharge vessel has a surface area that is at least ten times as large as that of the storage vessel. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a larger discharging vessel that would be at least ten times as large as the surface area of the storage vessel if necessary or desired to hold more liquid (or mud in this circumstance). Furthermore, it has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,085,717 to Anscherlik or U.S. Patent No. 5,140,527 to Jones et al.

Each of Anscherlik and Jones et al. do not explicitly disclose that the discharge vessel has a depth smaller than the storage vessel. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

provide a discharge vessel that has a depth smaller than the storage vessel to facilitate quicker draining of the discharge vessel and prevent overflow and backflow of liquids.

11. Alternatively, claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,085,717 to Anscherlik.

Anscherlik fails to disclose that the liquid discharging means has a sufficient flow rate larger than that of the liquid supplying means. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the liquid discharging means at a flow rate larger than that of the liquid supplying means to prevent flooding and spilling in the equipment.

12. Alternatively, claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,085,717 to Anscherlik or U.S. Patent No. 5,140,527 to Jones et al.

Each of Anscherlik and Jones et al. fail to address whether the storage vessel, flow path, and discharging vessel are formed integrally. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the storage vessel, flow path, and discharging vessel integrally to reduce the number of manufacturing steps for simplicity. Furthermore, it has been held that forming in one piece an article, which has formerly been formed in a plurality of pieces and put together, involves only routine skill in the art (*Howard v. Detroit Stove Works*, 150 U.S. 164 (1893)).

13. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,085,717 to Anscherlik or U.S. Patent No. 5,140,527 to Jones et al. in view of JP 9-101099 to Hashizume et al.

Each of Anscherlik and Jones et al. fail to address whether the storage vessel, flow path, and discharging vessel are formed integrally from a material make acrylic board. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to integrally form the storage vessel, flow path, and discharging vessel from acrylic board to provide a biocompatible, leak-tight device as taught by Hashizume et al.

Allowable Subject Matter

14. Claims 7 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or fairly suggest an opened canaliculated shape nor hydrophilic-treated surfaces of the liquid treating equipment as recited in the claims.

Response to Arguments

16. Applicant's arguments filed August 30, 2004 have been fully considered but they are not persuasive. An interview was previously conducted with Leana Levin on October 19, 2004 in which applicant address the same identical issues presented in the arguments filed August 30, 2004. The examiner has previously addressed (see

interview summary mailed October 22, 2004) these issues and informed applicant that the previous art rejections would be maintained.

As to the 112, first paragraph, rejection the examiner has maintained the rejection for reasons given above. Applicant states Figure 2 provides for enablement of the invention. However figure 2 does not provide support for an "almost" location for both when the inlet is positioned above and below the desired level.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, with 2nd and 4th F off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

brg


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